Ninja Warrior 150 PSI

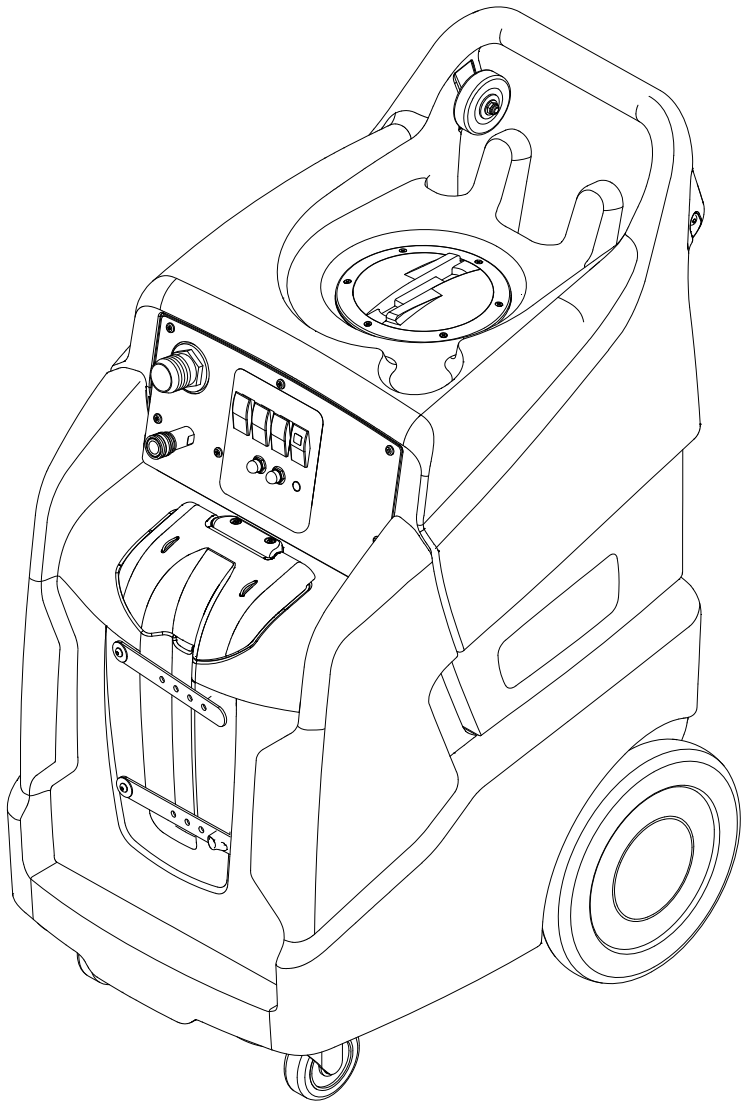
PROCHEM
Kärcher Group

Extractor

Operating Instructions (ENG)

MODELS:

NWCU2215H
10070640



From Serial Number (Ref No. 1*)
* See Serial Number page or call manufacturer

86399030-A 02/08/15

Model: _____

Date of Purchase: _____

Serial Number: _____

Dealer: _____

Address: _____

Phone Number: _____

Sales Representative: _____

Overview

The Ninja Warrior is an electric powered carpet extractor intended for commercial use. This appliance applies a cleaning solution to the carpet and then vacuums the soiled water back into the recovery tank.

Warranty Registration

Thank you for purchasing a Prochem Kärcher Group product. Warranty registration is quick and easy. Your registration will allow us to serve you better over the lifetime of the product.

To register your product go to :

http://www.prochem.com/WarrantyRegistration.aspx

For customer assistance:

1-800-444-7654

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Kärcher Group

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This manual contains the following sections:

- How to Use This Manual
- Safety
- Operations
- Maintenance

The HOW TO USE THIS MANUAL section will tell you how to find important information for ordering correct repair parts.

Parts may be ordered from authorized dealers. When placing an order for parts, the machine model and machine serial number are important. Refer to the MACHINE DATA box which is filled out during the installation of your machine. The MACHINE DATA box is located on the inside of the front cover of this manual.

Model: _____

Date of Purchase: _____

Serial Number: _____

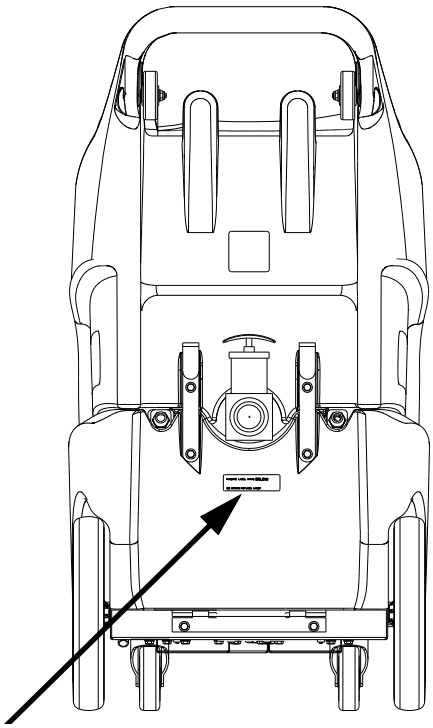
Dealer: _____

Address: _____

Phone Number: _____

Sales Representative: _____

The model and serial number of your machine is located on the back of the machine.



The SAFETY section contains important information regarding hazardous or unsafe practices of the machine. Levels of hazards are identified that could result in product damage, personal injury, or severe injury resulting in death.

The OPERATIONS section is to familiarize the operator with the operation and function of the machine.

The MAINTENANCE section contains preventive maintenance to keep the machine and its components in good working condition. They are listed in this general order:

- Maintenance
- Lubrication
- Vacuum Motor Replacement
- Solution P)ump Replacement
- Troubleshooting

NOTE: If a service or option kit is installed on your machine, be sure to keep the KIT INSTRUCTIONS which came with the kit. It contains replacement parts numbers needed for ordering future parts.

NOTE: The manual part number is located on the lower right corner of the front cover.

IMPORTANT SAFETY INSTRUCTIONS

When using this machine, basic precaution must always be followed, including the following:

READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE.

⚠WARNING: To reduce the risk of fire, electric shock, or injury:

Connect to a **properly grounded outlet**. See Grounding Instructions.

Do not leave the machine unattended. Unplug machine from outlet when not in use and before maintenance or service.

Use only indoors. Do not use outdoors or expose to rain.

Do not allow machine to be used as a toy. **Close attention** is necessary when used by or near children.

Use only as described in this manual. Use only manufacturer's recommended components and attachments.

Do not use damaged electrical cord or plug. Follow all instructions in this manual concerning grounding the machine. If the machine is **not working properly**, has been dropped, damaged, left outdoors, or dropped into water, return it to an authorized service center.

Do not pull or carry machine by electrical cord, use as a handle, close a door on cord, or pull cord around sharp edges or corners.

Do not run machine over cord. **Keep** cord away from heated surfaces.

Do not unplug machine by pulling on cord. To unplug, grasp the electrical plug, not the electrical cord.

Do not handle the electrical plug or machine with wet hands.

Do not operate the machine with any openings blocked. Keep openings free of debris that may reduce airflow.

This machine is intended for cleaning carpet only.

Do not vacuum anything that is burning or smoking, such as cigarettes, matches, or hot ashes.

This machine is not suitable for picking up health endangering dust.

Turn off all controls before unplugging.

Machine can cause a fire when operating near flammable vapors or materials. Do not operate this machine near flammable fluids, dust or vapors.

This machine is suitable for commercial use, for example in hotels, schools, hospitals, factories, shops and offices for more than normal housekeeping purposes.

Maintenance and repairs must be done by qualified personnel.

If foam or liquid comes out of machine, switch off immediately.

READ AND SAVE THESE INSTRUCTIONS

The following symbols are used throughout this guide as indicated in their descriptions:

HAZARD INTENSITY LEVEL

There are three levels of hazard intensity identified by signal words -**WARNING** and **CAUTION** and ***FOR SAFETY***. The level of hazard intensity is determined by the following definitions:

⚠WARNING:

WARNING - Hazards or unsafe practices which COULD result in severe personal injury or death.

⚠CAUTION:

CAUTION - Hazards or unsafe practices which could result in minor personal injury or product or property damage.

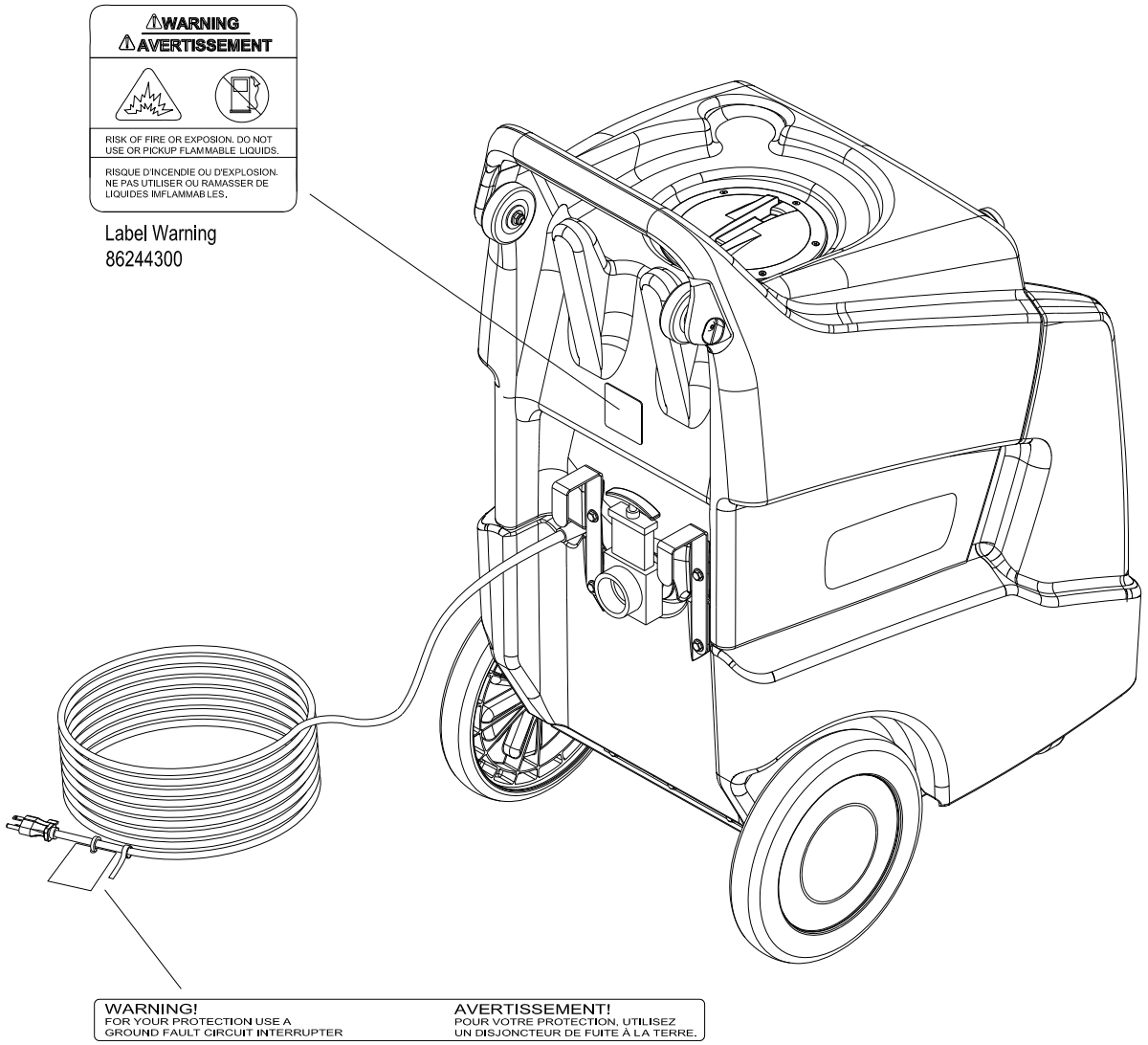
FOR SAFETY: To Identify actions which must be followed for safe operation of equipment.
Report machine damage or faulty operation immediately. Do not use the machine if it is not in proper operating condition. Following is information that signals some potentially dangerous conditions to the operator or the equipment. Read this information carefully. Know when these conditions can exist. Locate all safety devices on the machine. Please take the necessary steps to train the machine operating personnel.

FOR SAFETY:
DO NOT OPERATE MACHINE:
Unless Trained and Authorized.
Unless Operation Guide is Read and understood.
In Flammable or Explosive areas.
In areas with possible falling objects

WHEN SERVICING MACHINE:
Avoid moving parts. Do not wear loose clothing; jackets, shirts, or sleeves when working on the machine. Use manufacturer approved replacement parts.

Safety Labels

NOTE: These drawings indicate the location of safety labels on the machine. If at any time the labels become illegible, promptly replace them.


⚠WARNING
⚠AVERTISSEMENT
RISK OF FIRE OR EXPOSION. DO NOT USE OR PICKUP FLAMMABLE LIQUIDS.
RISQUE D'INCENDIE OU D'EXPLOSION. NE PAS UTILISER OU RAMASSER DE LIQUIDES IMFLAMMABLES.
Label Warning
86244300
WARNING!
FOR YOUR PROTECTION USE A GROUND FAULT CIRCUIT INTERRUPTER
AVERTISSEMENT!
POUR VOTRE PROTECTION, UTILISEZ UN DISJONCTEUR DE FUITE À LA TERRE.
LABEL CIRCUIT INTERRUPTER
86200570

Grounding Instructions

THIS PRODUCT IS FOR COMMERCIAL USE ONLY.

ELECTRICAL:

In the USA this machine operates on a standard 15 amp 115V, 60 hz, A.C. power circuit. The amp, hertz, and voltage are listed on the data label found on each machine. Using voltages above or below those indicated on the data label will cause serious damage to the motors.

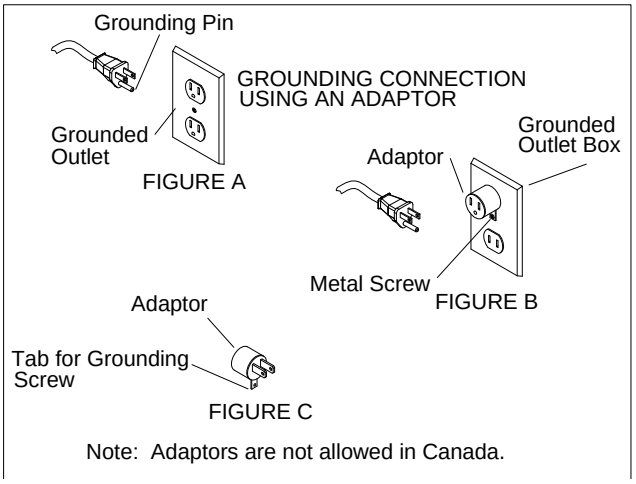
EXTENSION CORDS:

If an extension cord is used, the wire size must be at least one size larger than the power cord on the machine, and must be limited to 50 feet (15.5m) in length.

GROUNDING INSTRUCTIONS:

This appliance must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

This appliance is for use on a nominal 120-volt circuit, and has a grounded plug that looks like the plug in "Fig. A". A temporary adapter that looks like the adapter in "Fig. C" may be used to connect this plug to a 2-pole receptacle as shown in "Fig. B", if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet (Fig. A) can be installed by a qualified electrician. The green colored rigid ear, lug, or wire extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover Whenever the adapter is used, it must be held in place by a metal screw.



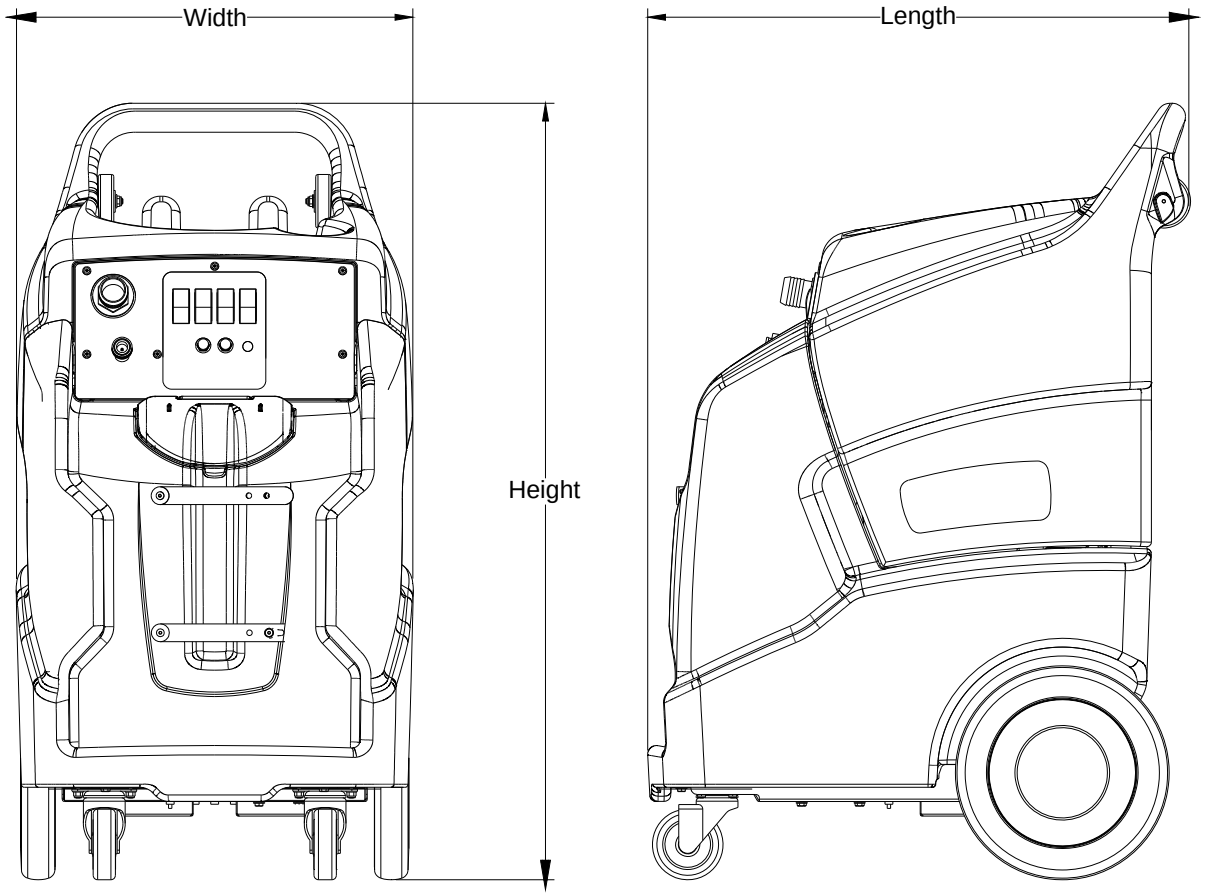
Note: Adaptors are not allowed in Canada.

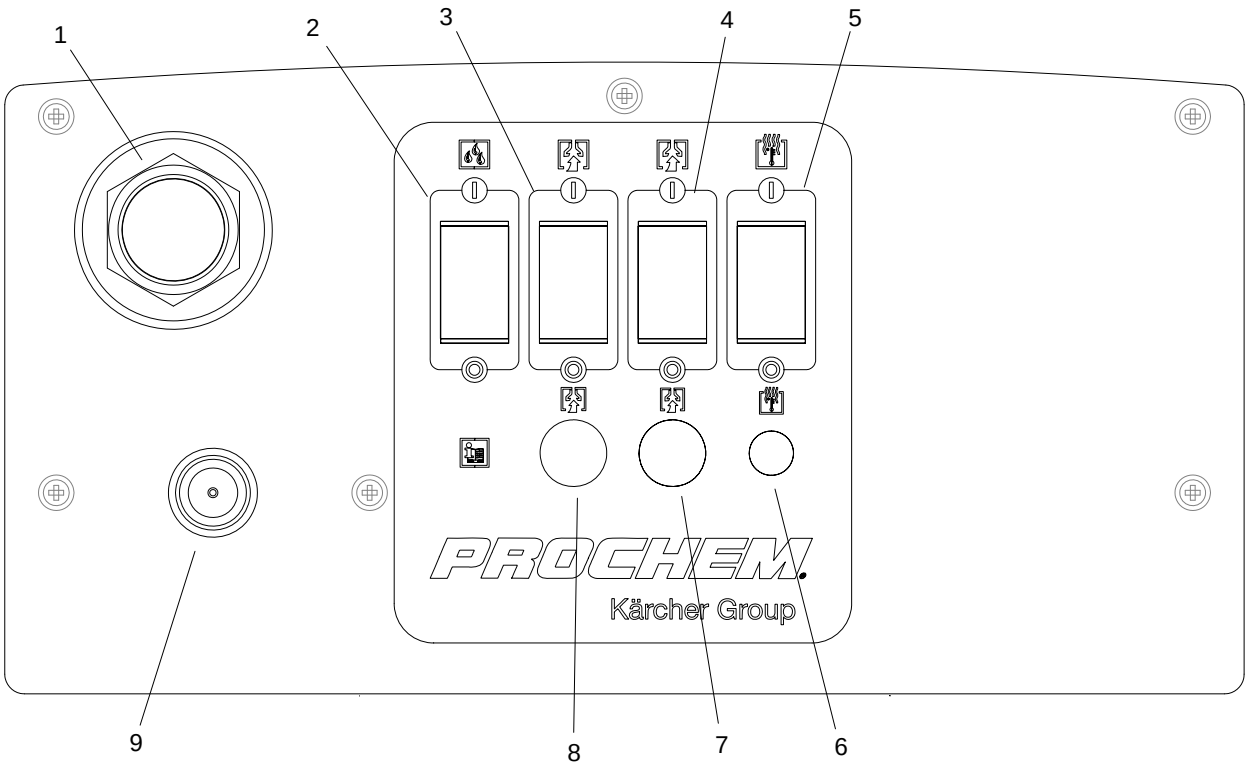
⚠WARNING:

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

Technical Specifications

MODEL	ITEM	MEASURE
ALL	Electrical	115 Volt, 60 hz, 15A
	Solution Pump	150 psi
	Solution Capacity	13 Gal
	Recovery Capacity	11Gal
	Height	43 inches
	Length	30 inches
	Width	22 inches
10070640	Vacuum Motor	Dual 2 Stage
	Weight- Empty	120 lbs
	Weight-Full Solution	215 lbs
	Power cord	2 X 25 feet
	Heater	1850 watts





Controls

1. Vacuum Accessory Tool Hook-up
2. Solution Pump Switch
3. Vacuum 1 Switch
4. Vacuum 2 Switch
5. Heater Switch with On Light (Units with Heat Only)
6. Heater Temperature Light (Units with Heat Only)
7. Breaker for Vacuum 2
8. Breaker for Vacuum 1
9. Solution Accessory Tool Hook-up

Machine Operation

⚠WARNING:

Care must be exercised in the use of all chemicals. Chemicals are poisonous and can pose a health risk. Read and follow manufacturers instructions regarding dangers and correct usages.

⚠CAUTION:

The internal parts of the pump used in the machine are suitable for use with most carpet cleaning chemicals. But they are susceptible to chemical attack from some cleaning substances, such as hydrocarbon solvents and chlorinated bleaches. These non-compatible materials are not of the type used for carpet cleaning.

Chemicals

Suitable Chemicals

- Alkalis
- Detergents
- Hydroxides
- Soaps
- Vinegar

Non-Compatible

- Aldehydes
- Aromatics Hydrocarbons
- SP Butyls
- Carbon Tetrachloride
- Clorox*
- Chlorinated Bleaches
- Chlorinated Hydrocarbons
- Lysol*
- Methyl Ethel Ketone (MEK)
- Perchorethylene (perc)
- Phenolics
- Trichlorethylene
- D-Limonene

*Registered Trademark

Only use chemicals approved for use with this machine. Use of non-compatible chemicals may cause machine damage and will not be covered under the warranty. Carefully read ingredients on manufacturer's label before using any product in this machine.

⚠WARNING:

Do not let pump run dry.

⚠WARNING:

Do not let pump run unattended.

Pre-Run Inspection

1. Check all fittings and connectors for proper assembly.
2. Check all hoses for leaks. Repair or replace any damaged hoses.
3. Check power cord(s) for any damage. If damaged, replace.

Equipment Set-up

1. Plug power cord from machine into properly grounded wall outlet.
2. Turn vacuum motor switch on and off to make sure there is electrical power at machine.
3. Connect vacuum hose to machine. Slide the swivel cuff over the outlet on the tank.
4. Connect the hose to your machine and wand. Pull back the knurled collar on the quick disconnect coupler and push onto the connection on the chassis. To avoid leaks, check that a positive connection was made.

   NOTE: Wand orifice must be equivalent or larger than an 04 nozzle.

5. Using a clean container, fill the solution tank with clean hot water. Do not use water over 130°F. Mix in a non-foaming cleaning concentrate for use in hot water extraction machines, following the manufacturer's instructions printed on container.

   NOTE: When using a powder cleaner, pre-mix with hot water in a clean container before adding to the solution tank.

6. Turn pump and vacuum switches) to the on position.

Heater Operation

NOTE: Units with Heat Only.

⚠WARNING:

The solution fittings on the machine will become extremely hot during operation. Allow sufficient time to cool, or run solution through the machine with the heater turned off before disconnecting or performing any maintenance on the heater.

Plug the two power cords into separate grounded circuits. The heater draws 15 amps of current.

Turn the solution pump **ON**. Fully prime the solution system before turning heater on.

Turn the heater switch on. The red light on the heater switch will be on when the heater switch is on. The red heater temperature light will be on when the heater is active and will turn off when the heater reaches maximum temperature.

On initial start-up the heater will take a few minutes to reach operating temperature.

When turning the pump and heater **OFF**, make certain that you turn the heater off **FIRST**.

Cleaning

⚠WARNING:

Always use defoamer if foaming occurs. Foam will suspend large particles that may damage vacuum(s) as well as allow liquid into the vacuum motor(s) without activating the float shutoff.

1. Prior to cleaning, make certain that the nozzle is functioning properly.
   a. To check, hold the wand about one foot above the surface to be cleaned and open the wand valve. A full spray should be observed from the nozzle.
   b. If the nozzle is not showing a full spray pattern, adjust nozzle for proper pattern, clean, or replace nozzle.
2. Normally, chemical is applied on the push stroke of the wand when cleaning. Vacuuming is done on the pull stroke. For heavily soiled carpets the wand may be used in a scrubbing manner, applying chemical in both the push and pull stroke.
3. When cleaning, keep the working opening (wand mouth) flat on the surface being cleaned. Keep the wand moving when the valve is open.
4. The shutoff float inside the vacuum tank will impede the vacuum flow when the vacuum tank is full. When this occurs, empty the vacuum tank by opening the dump valve and dispose of the waste in a proper manner.

Once the vacuum tank has been emptied, you may once again proceed with cleaning.

Periodic Maintenance

Twice a month, flush a white vinegar solution (one quart vinegar to two gallons of water) or anti-browning solution (mixed as directed) through the machine. This will prevent build-up of alkaline residue in the system. If spray jets become clogged, remove the spray tips, wash them thoroughly, and blow dry.

NOTE: Do not use pins, wires, etc. to clean nozzles as this could destroy the spray pattern.

Periodically inspect all hoses, electrical cables and connections on your machine. Frayed or cracked hoses should be repaired or replaced to eliminate vacuum or solution pressure loss. The electrical cable must be well insulated and cable connector screw kept tight. If the cable insulation is broken or frayed, repair or replace immediately. Don't take chances with electrical fire or shock.

Daily/Regular Maintenance

⚠WARNING:

Before making any repairs or adjustments to the machine, disconnect the power cords from the electrical source.

1. Empty unused cleaning solution from the solution tank.
2. Inspect and clean filter screen in solution tank.
3. Flush pumping system with 1 to 2 gallons of clean water.
4. After each use, rinse tank with fresh water. Periodically inspect the recovery tank and decontaminate if necessary, using a Hospital Grade Virucide or a 10-1 bleach to water solution. Waste water should be disposed of properly.

Do not allow machine to freeze.

SERVICE SCHEDULE	DAILY	WEEKLY	QUARTERLY
Check machine for cord damage	*		
Check recovery dome and gasket for damage and cleanliness	*		
Check hoses for wear, blockages, or damage	*		
Check handles, switches, and knobs for damage	*		
Run one gallon of water through system	*		
Clean out recovery tank and check float valve to make sure it moves freely	*		
Clean out solution tank and remove and clean vacuum intake screen	*		
Clean outside of all tanks and check for damage	*		
Run vacuum motor for at least one minute to allow motor to dry	*		
Store with dome off tank to allow the tank to dry	*		
Check all gaskets for wear and leakage		*	
Check pump pressure; observe spray pattern and check with gauge if necessary		*	
Check and clean solution screen		*	
Check cables for fraying		*	
Check overall performance of machine		*	
Check vacuum motor carbon brushes			*

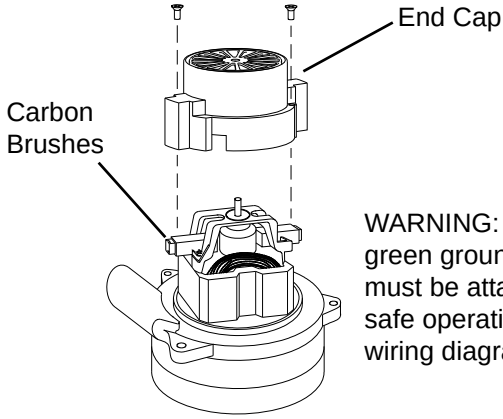
⚠WARNING:

Only qualified maintenance personnel are to perform the following repairs.

Vacuum Motor Replacement

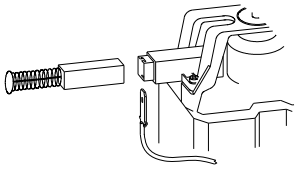
1. Turn off all switches and unplug machine.
2. Remove hardware under front of machine to access component compartment.
3. Remove vacuum motor cover and disconnect motor wires.
4. Remove the vacuum motor.
5. Reverse process to install vacuum motor.

Vacuum Motor Carbon Brushes Replacement



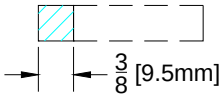
WARNING: The green ground wire must be attached for safe operation. See wiring diagram.

If armature commutator is grooved, extremely pitted or not concentric, the motor will need to be replaced or sent to a qualified service center.



Important:

These brushes wear quicker as the length shortens due to increased heat. Spring inside brush housing will damage motor if brushes are allowed to wear away completely.



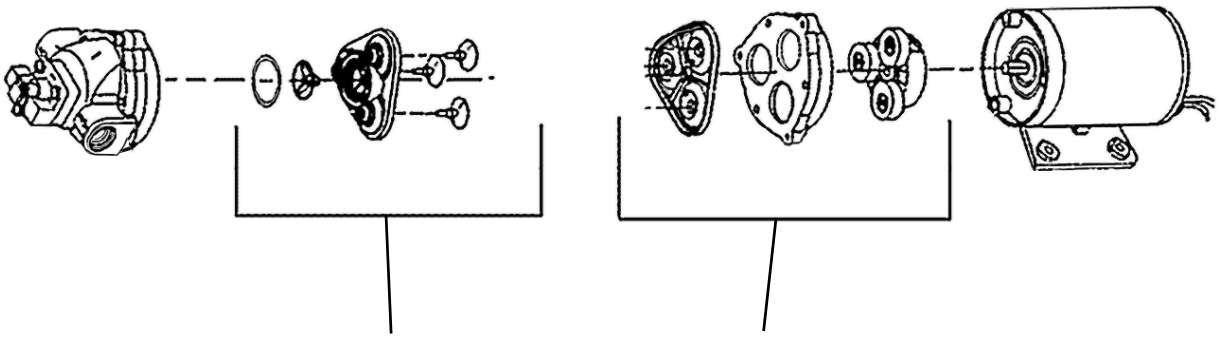
Periodically check the length of the carbon brushes. Replace both carbon brushes when either is less than 3/8" (9.5mm) long.

Solution Pump Replacement

⚠WARNING:

Only qualified maintenance personnel are to perform the following repairs.

PUMP REPLACEMENT KITS
150 PSI

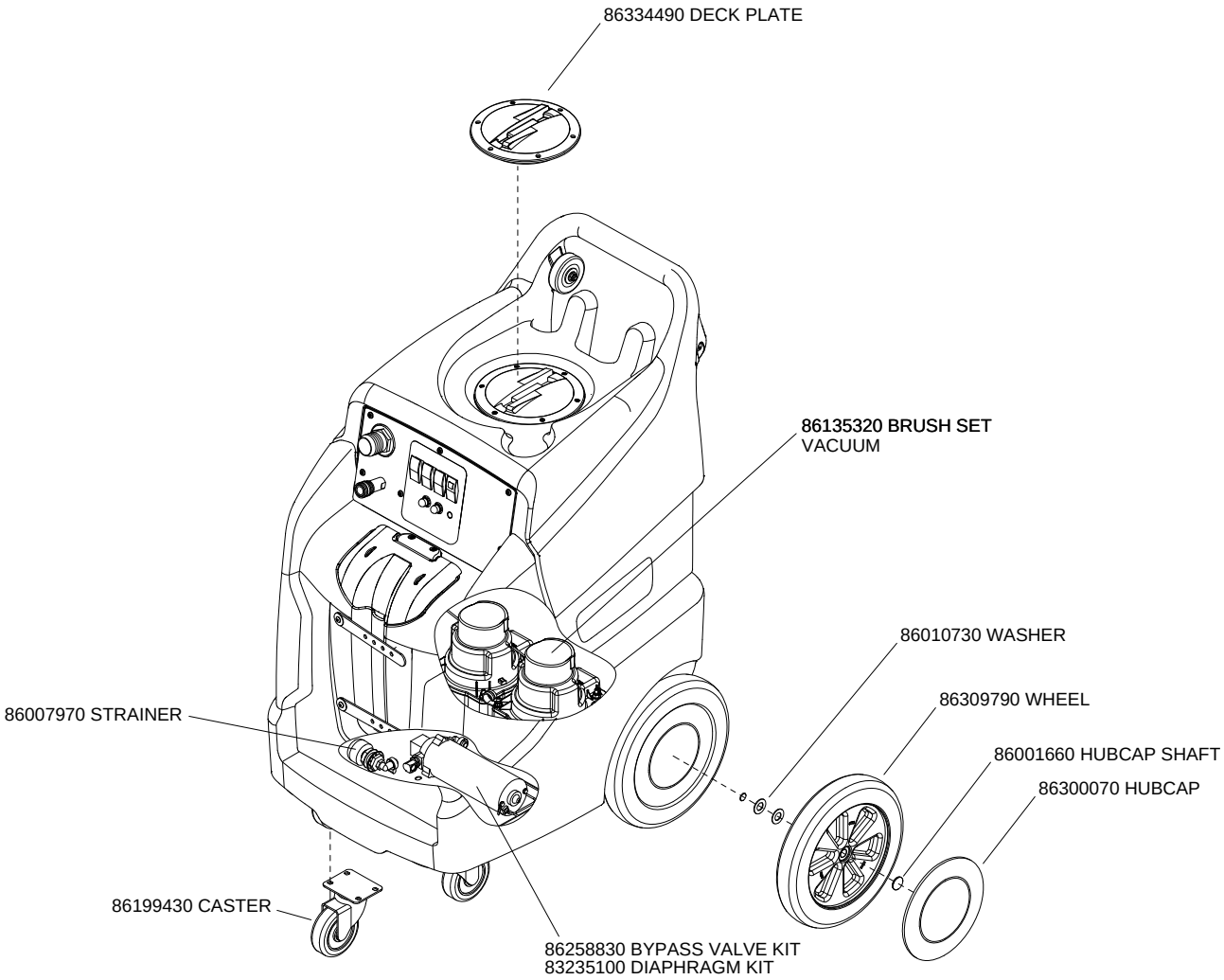


Bypass Valve Kit
86258830

Diaphragm Kit
86235100

Troubleshooting

PROBLEM	CAUSE	SOLUTION
Loss of Power	Unit not plugged in	Connect unit to 3 prong grounded outlet.
	Dead electrical circuit	Check building circuit breaker or fuse box.
	Faulty power cord	Replace
Electrical shock	Receptacle not grounded	Contact an electrician to check building's wiring
	Internal wiring problem	Have a trained service technician check machine's wiring
Vacuum motor speed varies or doesn't run	Vacuum circuit breaker tripped	Reset Breaker
	Faulty vacuum motor	Replace
	Faulty switch	Replace
Loss of vacuum	Loose vacuum dome	Center and seal dome over tank
	Crack in dome or poor joint	Replace or repair using acrylic plastic cement only
	Lint or dirt clogging vacuum screen	With power off clean screen
	Loose cuffs on vacuum hose	Tighten cuffs turning counterclockwise
	Vacuum motor seals leaking	Replace
	Floor tool vacuum chamber clogged	Wash out with hose. Pick lint out with a wire
	Vacuum hose damaged	Replace
	Recovery tank full / Float ball stuck in the up position	Turn off power, drain recovery tank.
Pump runs no solution	Pump inlet screen plugged	Clean inlet screen
	Pump not primed	Press trigger to open valve on cleaning wand to relieve air lock.
	Internal or external solution line damaged and leaking	Replace
Pump runs, loss of pressure	Internal pump components wearing out	Replace, see pump kit components
Pump will not run	Faulty switch	Replace
	Loose wiring	Repair or replace
Solution hose fitting hard to connect	Corrosion on fittings.	Clean with steel wool. Soak in acetic acid (white vinegar). Lubricate lightly with silicone base lubricant.
Carpet not getting clean	Severe soil conditions	Make several passes at right angles to each other. Use a pre-spray.
Carpet too wet	Over saturation	Make several passes without spray
Carpet browning	Leaving carpet too wet	Check for loss of vacuum pressure
	Too much chemical	Check label for correct solution concentration
Solution not flowing properly	Solution hose connection	Check for positive connection
	Faulty pump	Repair or replace
	Faulty floor tool valve / Nozzle	Repair or replace
	Faulty pump switch	Repair


86334490 DECK PLATE
86135320 BRUSH SET
VACUUM
86010730 WASHER
86309790 WHEEL
86001660 HUBCAP SHAFT
86300070 HUBCAP
86007970 STRAINER
86199430 CASTER
86258830 BYPASS VALVE KIT
83235100 DIAPHRAGM KIT

PROCHEM

Kärcher Group

Spare Parts List

(1.007-064.0)

Ninja Warrior 150 PSI

From Serial Number (Ref No. 1*)
* See Serial Number page or
call manufacturer

86399040-A 02/02/15

The PARTS LIST section contains assembled parts illustrations and corresponding parts list. The parts lists include a number of columns of information:

- REF - column refers to the reference number on the parts illustration.
- PART NO. - column lists the part number for the part.
- QTY - column lists the quantity of the part used in that area of the machine.
- DESCRIPTION - column is a brief description of the part.
- SERIAL NO. FROM - If this column has an (*) and a Reference number, see the SERIAL NUMBERS page in the back of your manual. If column has two asterisk (**), call manufacturer for serial number. The serial number indicates the first machine the part number is applicable to. The main illustration shows the most current design of the machine. When a boxed illustration is shown, it displays the older design.
- NOTES - column for information not noted by the other columns.

NOTE: *If a service or option kit is installed on your machine, be sure to keep the KIT INSTRUCTIONS which came with the kit. It contains replacement parts numbers needed for ordering future parts.*

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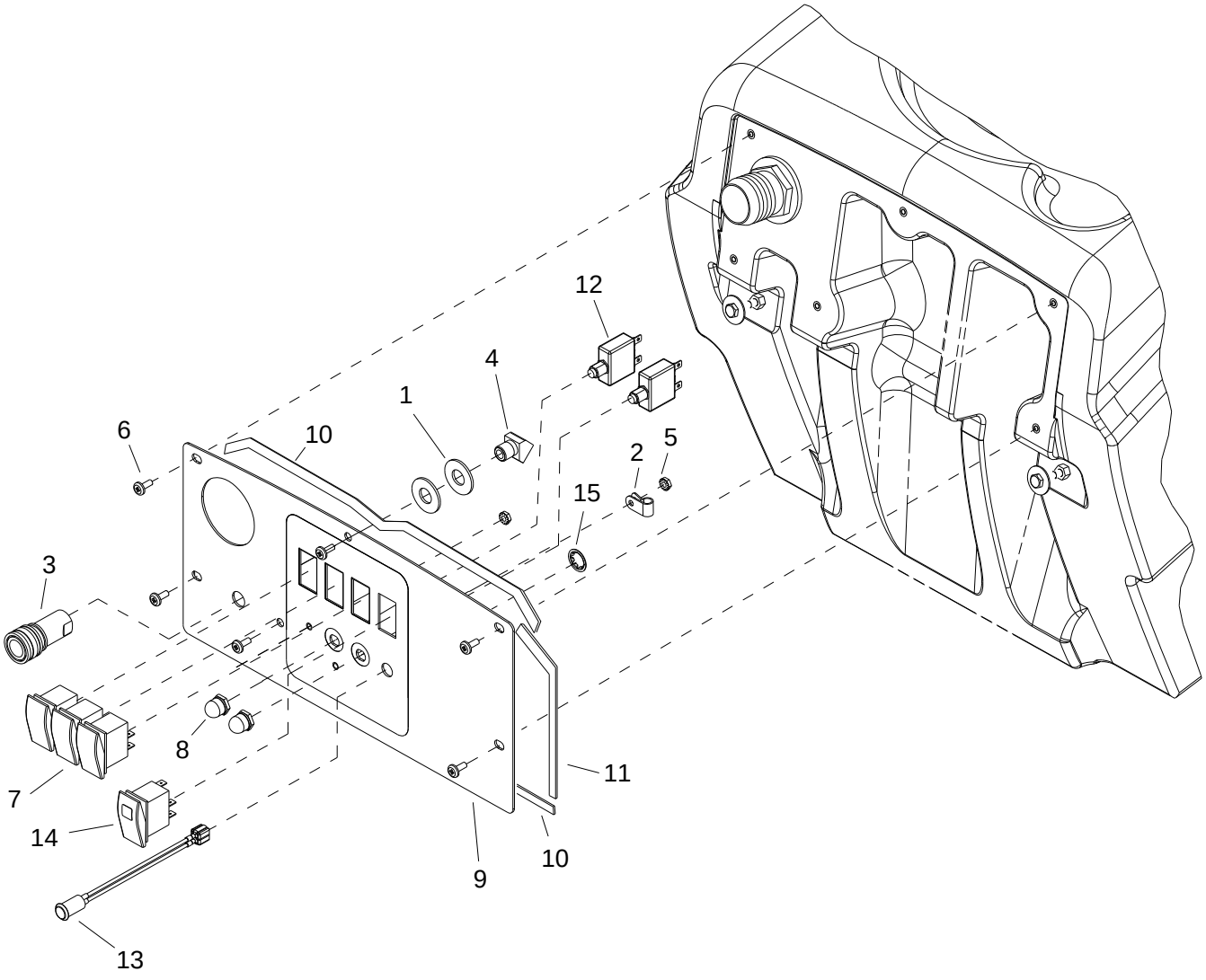
Decals 6
Electrical 8
Frame 10
Heater 12
Pump 14
Recovery 16
Solution 18
Vacuum 20
Wiring 22
Serial Number 24
Notes 25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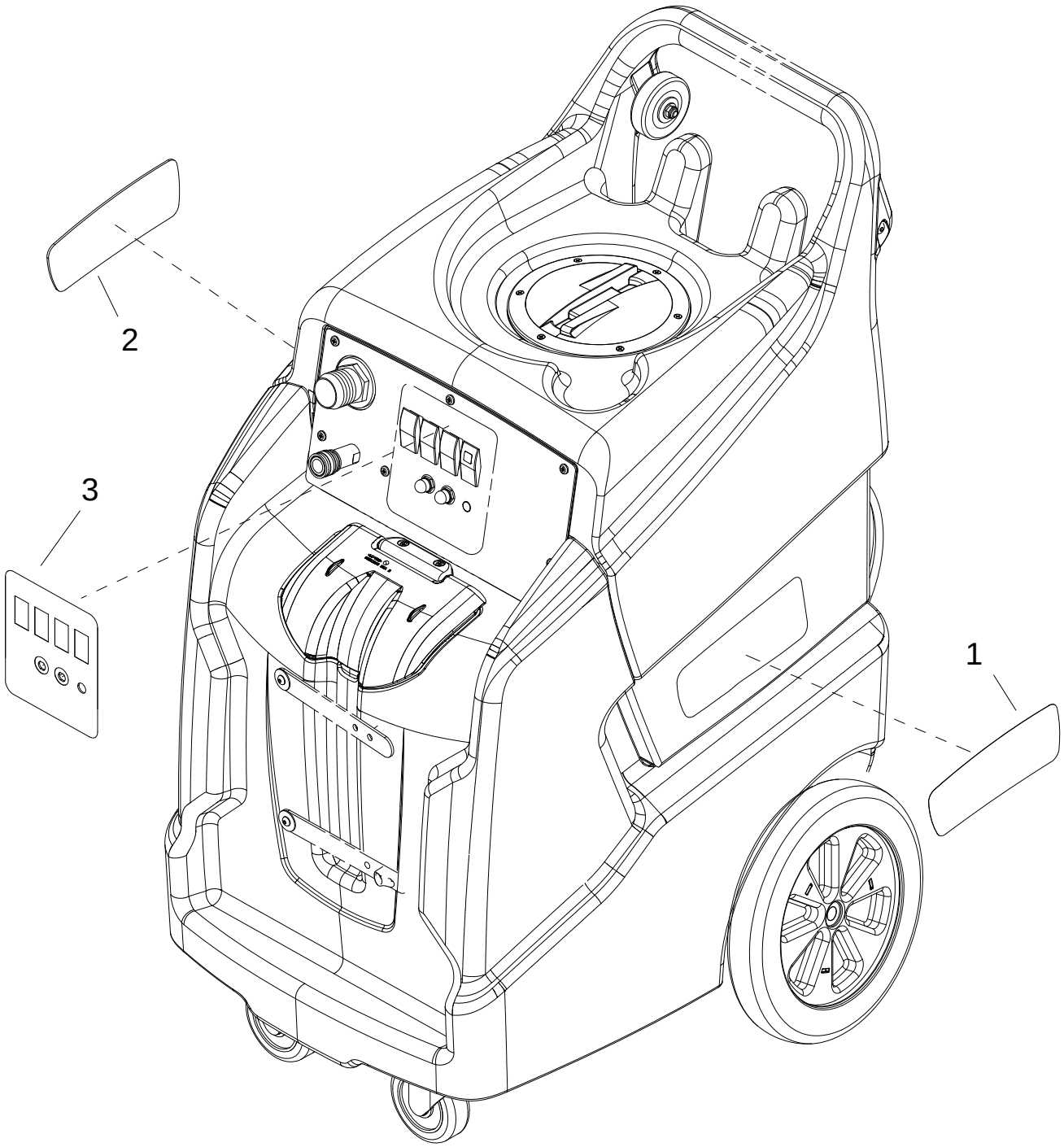
REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86202230	2	WASHER 9/16 S/S USS THICK		
2	86002370	1	CLAMP, 7/16 DIA NYLON UL		
3	86002450	1	COUPLER, 1/4 QD		
4	86197390	1	ELBOW, 1/4NPT 45D STREET		
5	86005700	2	NUT, 10-32 HEX W/ STAR		
6	86276820	6	SCR, 10-32 X 1/2 PTHMS BLK NP		
7	86007140	3	SWITCH, SPST 2-POSITION ROCKER		
8	86008900	2	BOOT, SEAL PUSH BUTTON 7/16		
9	86321170	1	PANEL, CONTROL, 150 HT		
10	86313020	2	GASKET, .125 T X .25 W X 15.6		
11	86313030	4	GASKET, .125 T X .25 W X 7.2		
12	86318320	2	BREAKER, 13A, 250VAC, 32VDC		
13	86318780	1	LIGHT ASM, HEATER, 120V		
14	86317850	1	SWITCH, LIGHTED 2-POS ROCKER		
15	86233480	1	CLIP, NEON LAMP		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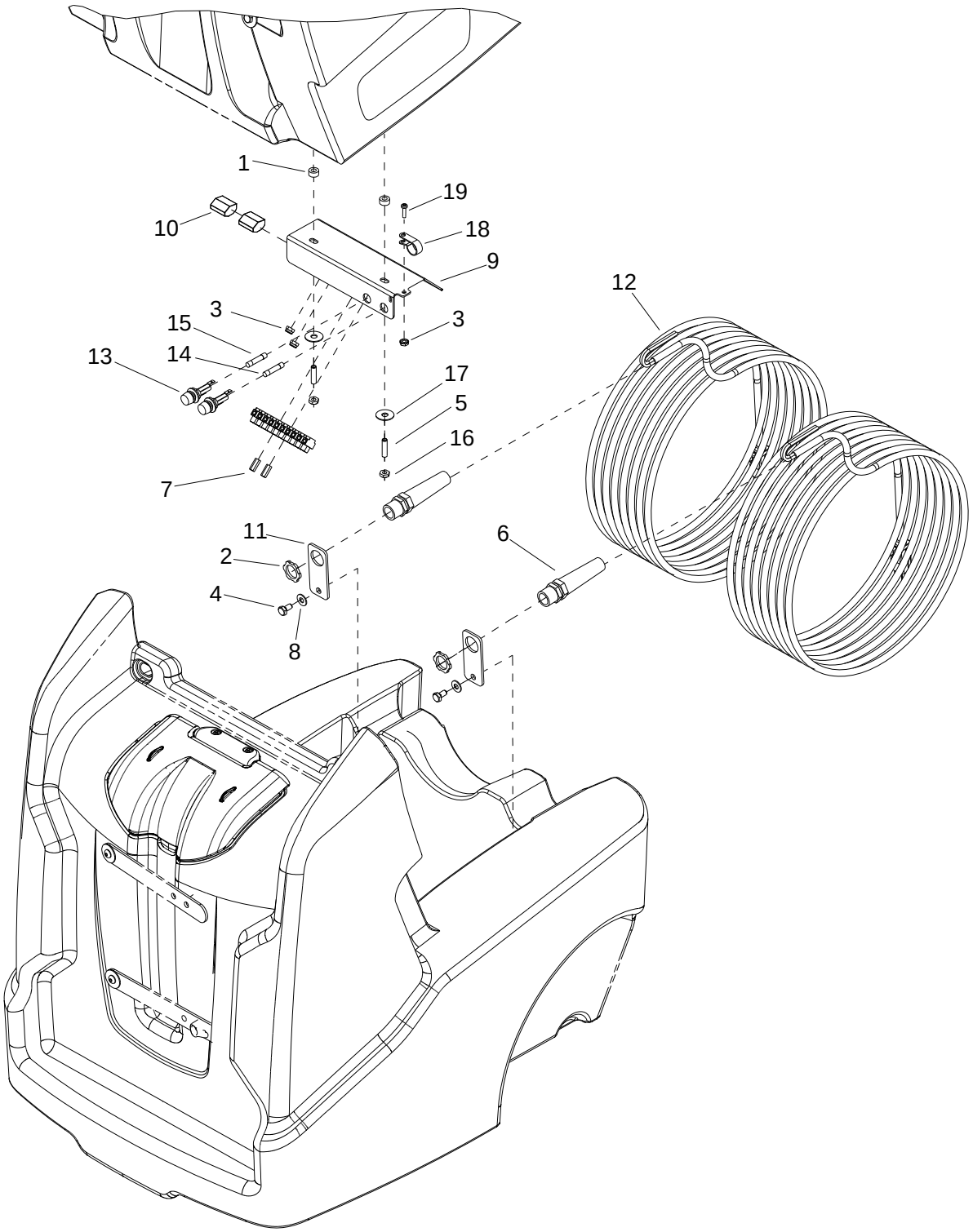
REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86399230	1	LABEL, NINJA, WARRIOR, LH		
2	86399240	1	LABEL, NINJA, WARRIOR, RH		
3	86399250	1	LABEL, NINJA, WARRIOR, W/ HEAT		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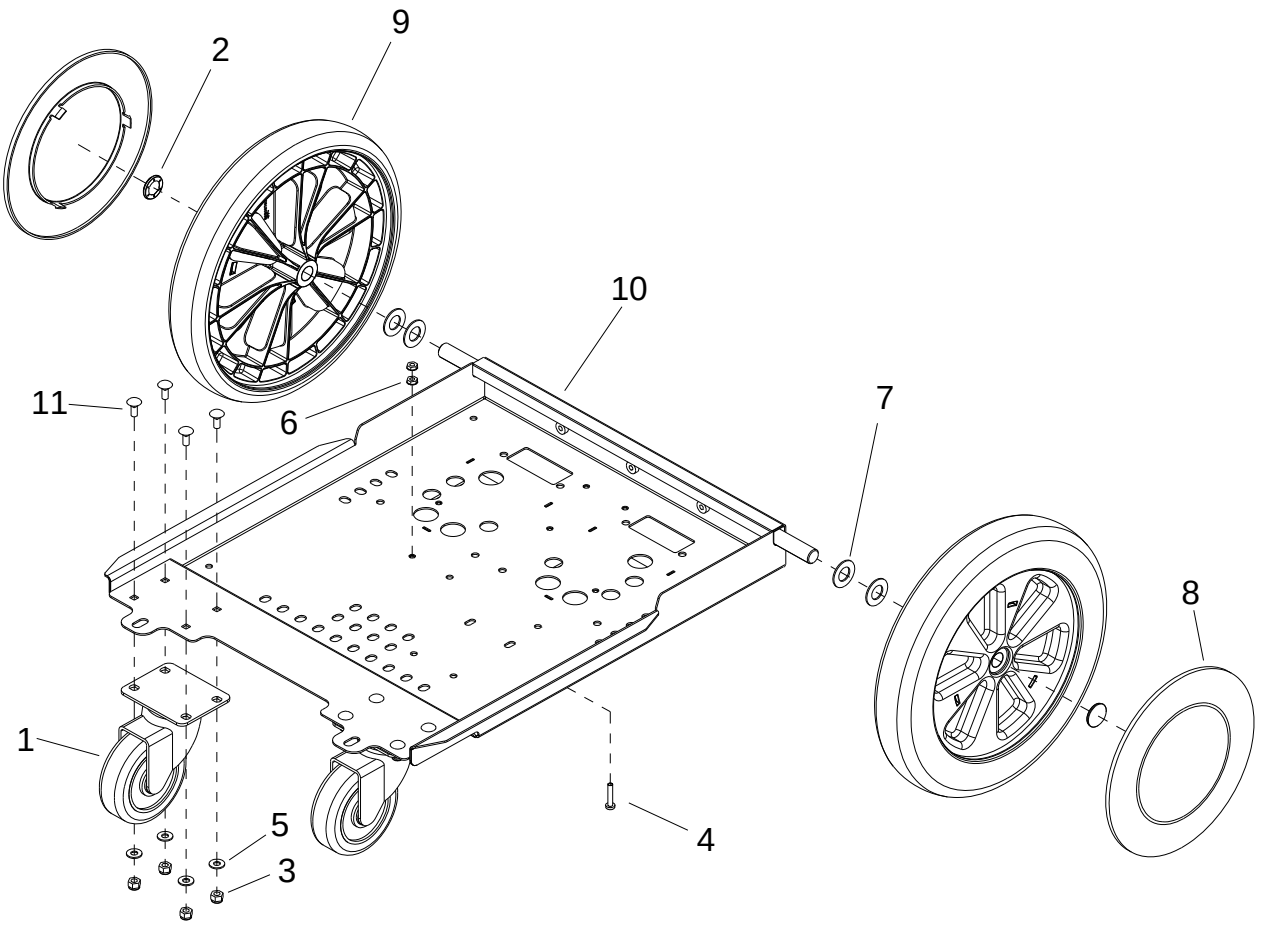
REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86201510	2	SPACER NYLON 1/4ID X 1/2 OD		
2	86005670	2	NUT, 1/2 NPT CONDUIT		
3	86005700	3	NUT, 10-32 W/STAR WASHER PLTD		
4	86273830	2	SCR, 1/4-20 X 1/2 HHCS SS		
5	86006850	2	SET SCR, 1/4-20 X 1.25L		
6	86256200	2	STRAIN RELIEF, 1/2 NPT FLEX		
7	86255900	2	STANDOFF, 6-32 X 5/8 HEX NYL		
8	86010630	2	WASHER, 1/4 X 5/8 FLAT SS		
9	86316460	1	BRKT, ELECTRICAL		
10	86316540	2	CONNECTOR, 5 POS, PUSH WIRE		
11	86316700	2	BRKT, CORD STRAIN RELIEF		
12	86318620	2	CORD ASM, 14/3 SJT X 25' BLK		
13	86319090	2	FUSE HOLDER, PANEL MNT		
14	86319100	1	FUSE, 1/4" X 1 1/4", 15A		
15	86319110	1	FUSE, 1/4" X 1 1/4", 4A		
16	86005810	2	NUT, 1/4-20 NYLOCK		
17	86323330	2	WASHER, 1/4" ID X 1.0D FLAT BLK		
18	86198460	1	CLAMP, 5/8 NYLON UL/CSA		
19	86006590	1	SCREW, 10-32 X 1/2 PPHMS SS NP		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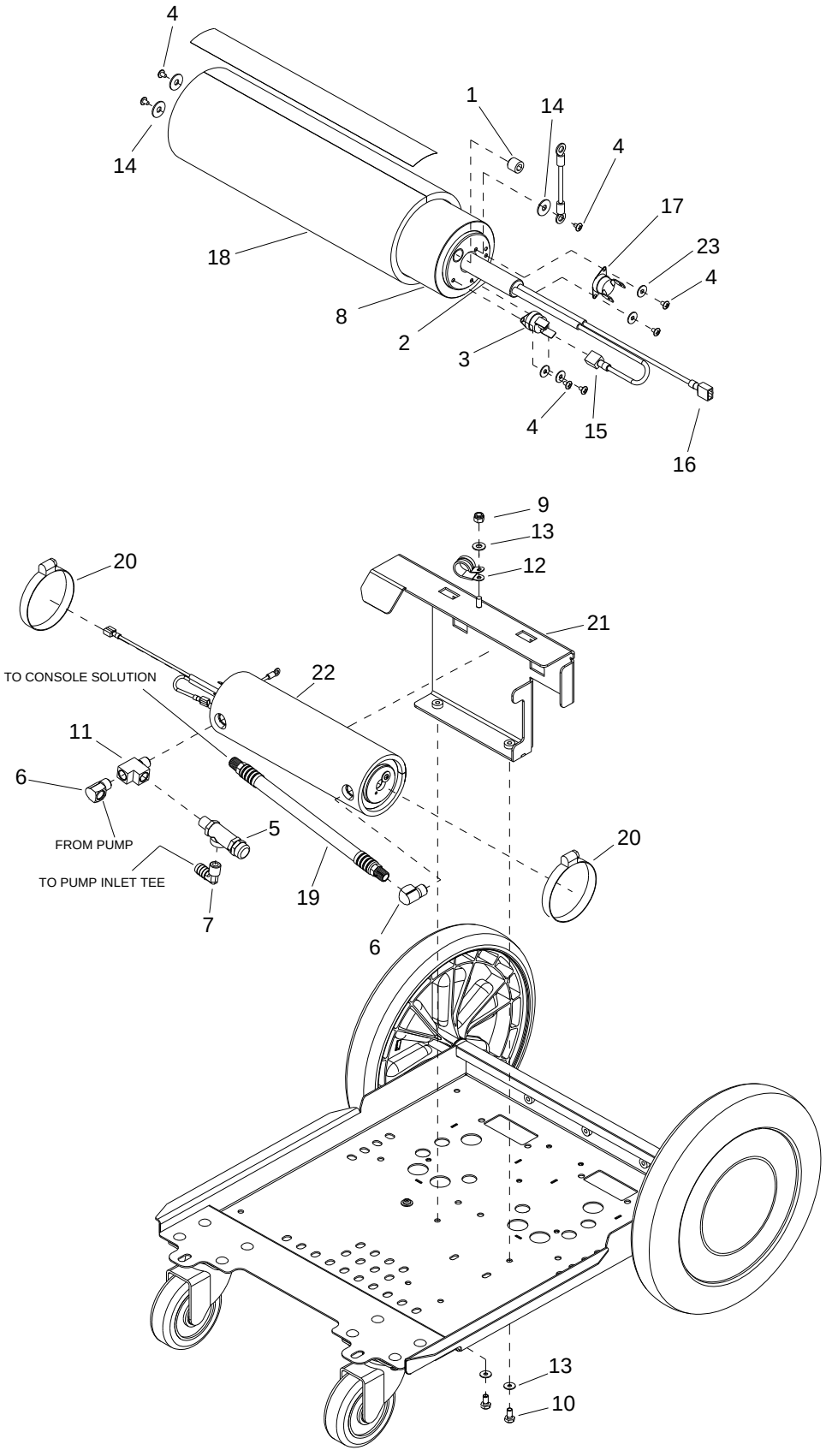
REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86199430	2	CASTER, SWIVEL 4" 250# CPCTY		
2	86001660	2	HUBCAP, 5/8 SHAFT		
3	86005810	8	NUT, 1/4-20 HEX NYLOCK SS		
4	86276080	1	SCR, 10-32 X 1” PPHMS GRN		
5	86010630	8	WASHER, 1/4 X 5/8 FLAT SS		
6	86005700	2	NUT, 10-32 HEX W/STAR		
7	86010730	4	WASHER, 5/8 X 1-3/16 FLAT SS		
8	86300070	2	HUBCAP, 9.75" WHEEL		
9	86309790	2	WHEEL, 12" X 2.25”		
10	86312830	1	FRAME, 5/8" AXLE, DUAL VAC		
11	86277500	8	SCR,1/4-20 X 5/8 CARR SS		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TO CONSOLE SOLUTION
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FROM PUMP
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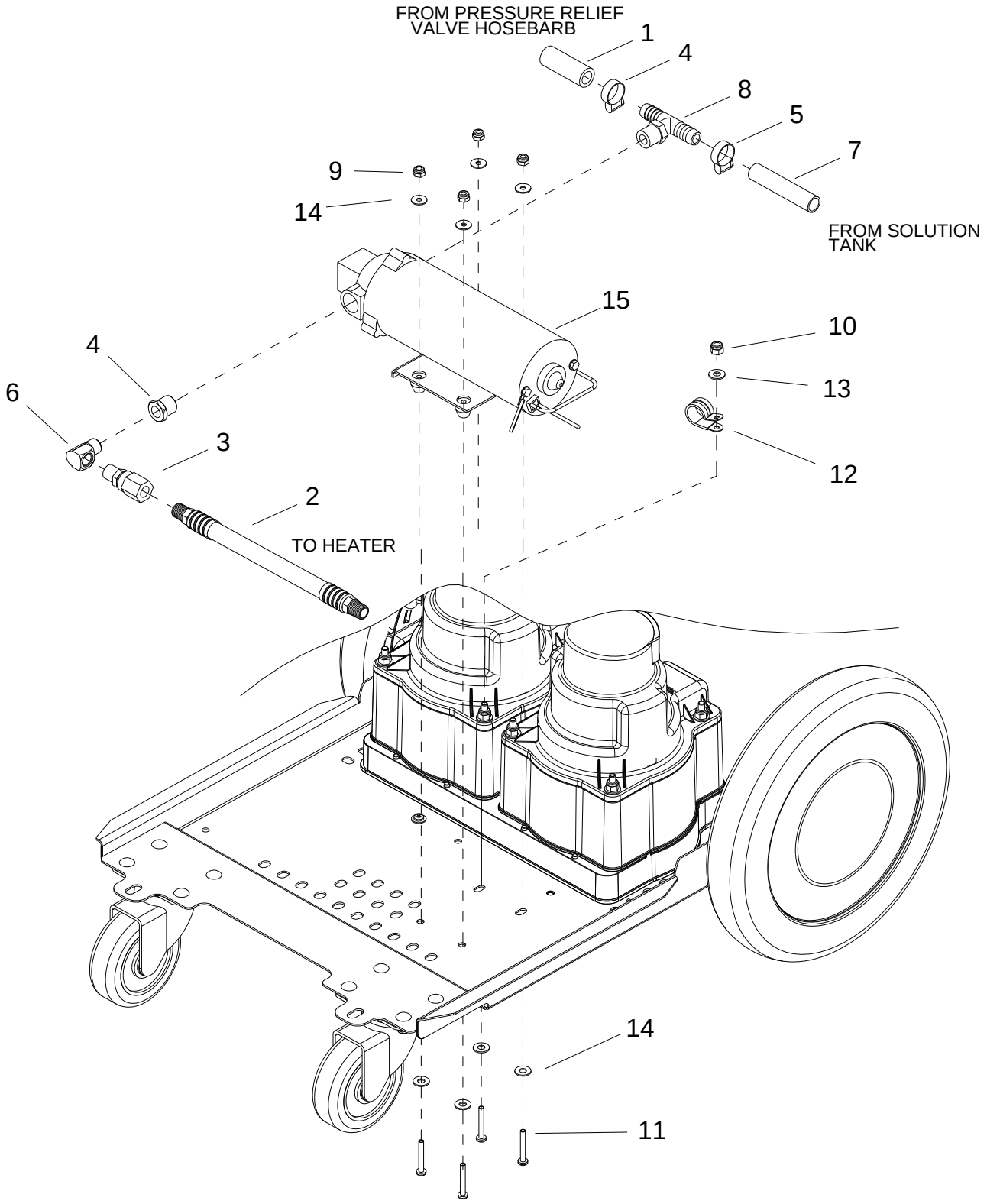
REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86006180	1	PLUG, 1/8 MPT HEX BRASS		
2	86199980	1	CARTRIDGE HEATER, 5/8" X 10"		
3	86201790	1	THERMOSTAT RESET 302		
4	86200870	7	SCR, 6 X 3/16, PHSMS, B		
5	86200980	1	PRESSURE RELIEF VALVE, 175		
6	86197360	2	ELBOW, 1/4 NPT STREET		
7	86197630	1	HOSEBARB, 1/4MPT X 1/2H 90DEG		
8	86326680	1	HEATER CART. CASE WELDED		
9	86005810	1	NUT, 1/4-20 HEX NYLOCK SS		
10	86273830	2	SCR, 1/4-20 X 1/2 HHCS SS		
11	86197760	1	TEE, 1/4 STREET		
12	86233410	1	CLAMP, 3/4 DIA CUSHION .406 DIA		
13	86010630	3	WASHER, 1/4 X 5/8 FLAT SS		
14	86010650	3	WASHER, #10 X 9/16 FLAT		
15	86266020	1	TERM, 14GA. .25 FEMALE		
16	86266130	1	TERM, 14GA. MALE COUPLER FI		
17	86317510	1	THERMOSTAT W/VERT SPADE		
18	86317730	1	INSULATION, HEATER		
19	86317860	1	HOSE,47.0 RED3/8 1/4MPTX1/4MPT		
20	86318310	2	CLAMP, 3.25 WORM GEAR SS		
21	86318410	1	BRKT, HEATER MOUNT		
22	86318750	1	HEATER ASM, 1850W, 120V		
23	86202220	4	WASHER #5 SS .135ID X .312 OD		


FROM PRESSURE RELIEF VALVE HOSEBARB
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FROM SOLUTION TANK
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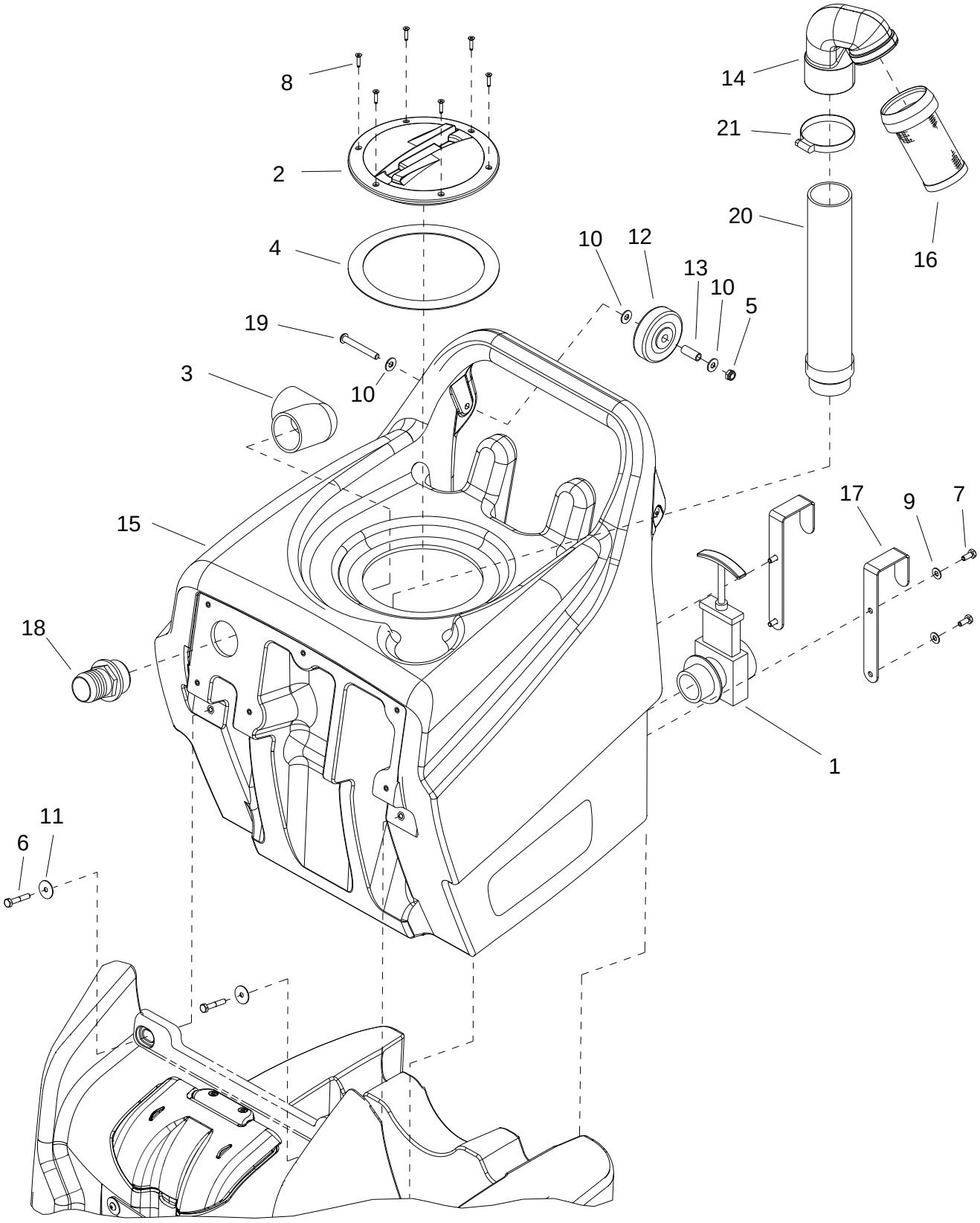
REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86280750	1	HOSE, 1/2ID WIRE BOUND X 21"		
2	86200220	1	HOSE,12.5 RED3/8 1/4MPTX1/4MPT		
3	86202130	1	VALVE, CHECK 1/4" NPT		
4	86197290	1	BUSHING, 3/8 MPT X 1/4 FPT HEX		
5	86233150	2	CLAMP, 3/8 WORM GEAR		
6	86197360	1	ELBOW, 1/4 NPT STREET		
7	86282320	1	HOSE, 1/2ID WIRE BOUND X 26"		
8	86240370	1	HOSEBARB, 3/8NPTX1/2TEE DL		
9	86005640	4	NUT, 10-32 HEX NYLOCK		
10	86005710	1	NUT, 1/4-20 HEX W/STAR WASHER		
11	86274450	4	SCR, 10-32 X 1.25 HHMS PLTD		
12	86233410	1	CLAMP, 3/4 DIA CUSHION .406 DIA		
13	86010630	1	WASHER, 1/4 X 5/8 FLAT SS		
14	86010650	8	WASHER, #10 X 9/16 FLAT		
15	86318630	1	PUMP, 115V 150PSI BYPASS		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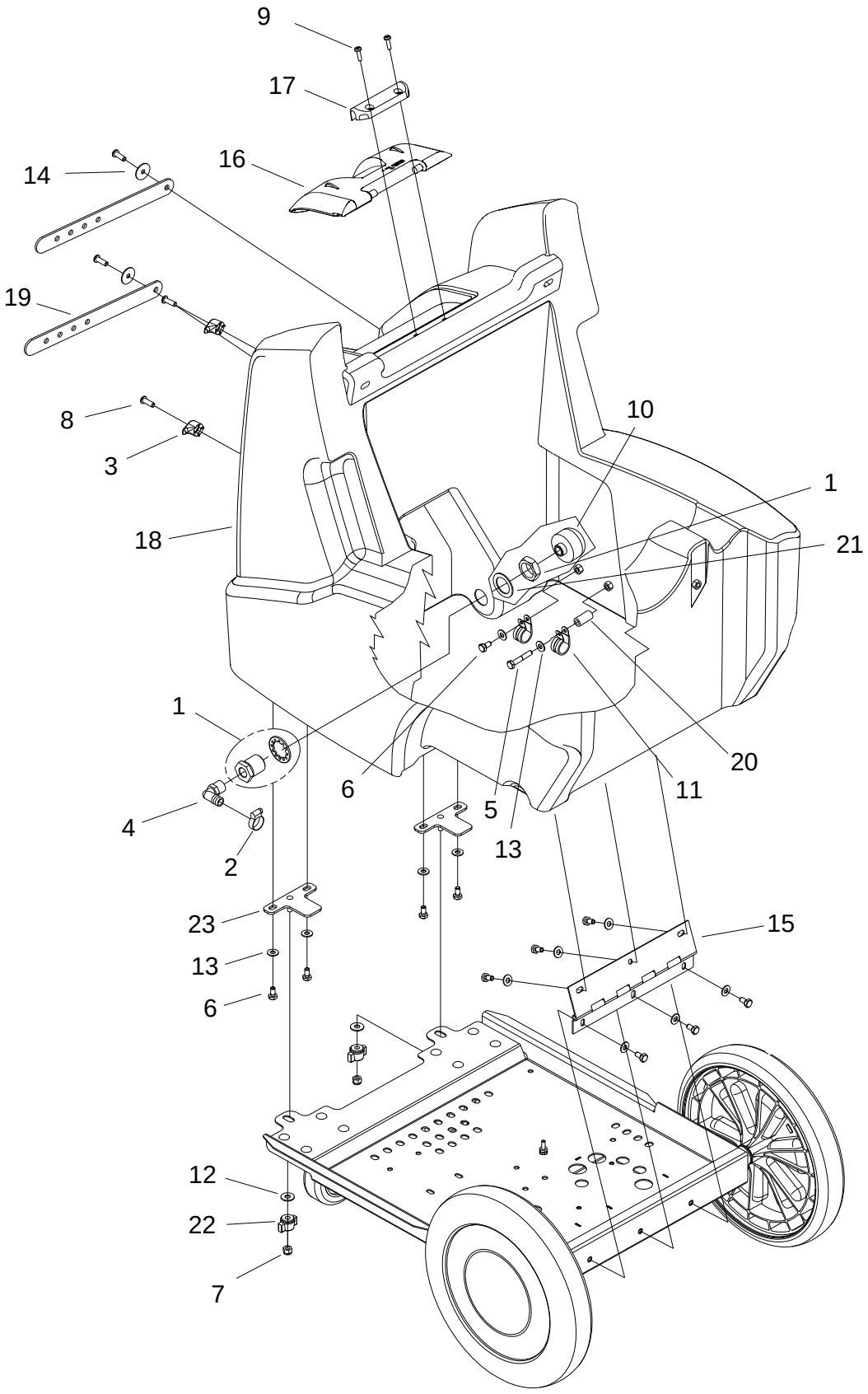
REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86161460	1	DUMP VALVE, 1 1/2		
2	86334490	1	DECK PLATE ASM, 6", YLW		
3	86197820	1	ELBOW, 1.5 FPT X FS PVC		
4	86004000	1	GASKET, TANK LID		
5	86197040	2	NUT, 5/16-18 HEX ACORN PLTD		
6	86273740	2	SCR, 1/4-20 X 1.50 HHCS SS		
7	86273750	4	SCR, 1/4-20 X 5/8 HHCS SS		
8	86275800	6	SCR, 8 X 3/4 PFHT/S BLK ZINC		
9	86010630	4	WASHER, 1/4 X 5/8 FLAT SS		
10	86010670	6	WASHER, 5/16 X 3/4 SS		
11	86323330	2	WASHER, 1/4 ID X 1.0 OD FLAT BLK		
12	86011020	2	WHEEL, 3" DIA. CUSHION RUBBER		
13	86001350	2	BUSHING, SPANNER .435 X 1.10		
14	86311510	1	ADAPTER, FLOAT 30 DEG, 2		
15	86312360	1	TANK, RECOVERY, TRIMMED		
16	86313040	1	SCRN, FLOAT, SHTOFF, 2		
17	86316710	2	BRKT, CORD, MOUNT		
18	86317230	1	HOSEBARB,1.5MPT X 1.5 W/FLNG		
19	86317720	2	SCR, 5/16-18 X 2.50 BSHCS SS		
20	86320790	1	PIPE ASM, 2", VACUUM		
21	86233120	1	CLAMP, 2.75" WORM GEAR		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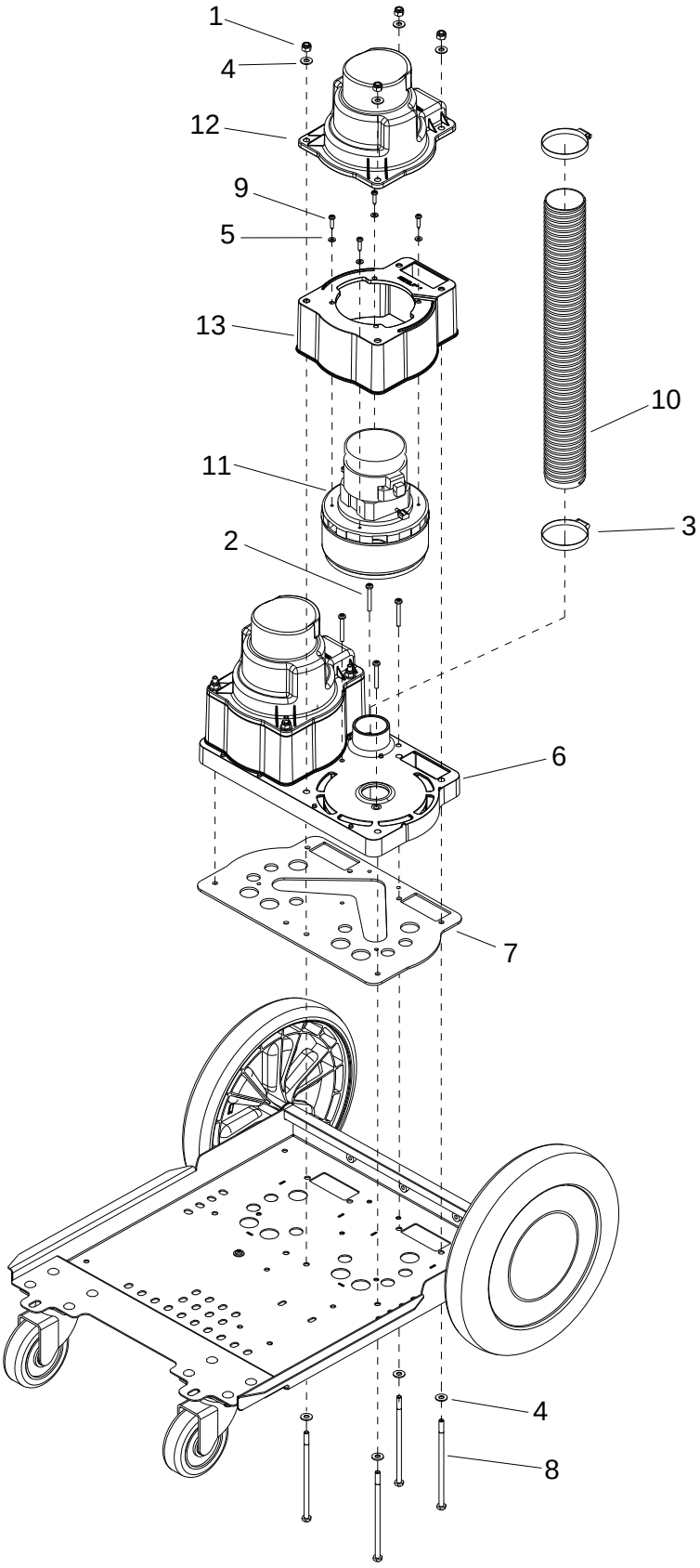
REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86173640	1	ADPT,3/8 BLKHD		COMPLETE
2	86233150	1	CLAMP, 3/8 WORM GEAR		
3	86238460	2	HOOK, STRAP		
4	86197940	1	HOSEBARB, 3/8 MPT X 1/2 HOSE 90		
5	86273740	1	SCR, 1/4-20 X 1.50 HHCS SS		
6	86273830	11	SCR, 1/4-20 X 1/2 HHCS SS		
7	86005810	2	NUT, 1/4-20 HEX NYLOCK SS		
8	86324210	4	SCR, 1/4-20 X 5/8 BHCS BLK		
9	86276160	2	SCR, 10-32 X 5/8 PPHMS BLK		
10	86007970	1	STRAINER, 3/8 IN. NPT 60 MESH		
11	86233410	2	CLAMP, 3/4 DIA CUSHION .406 DIA		
12	86010670	2	WASHER, 5/16 X 3/4 SS		
13	86010630	12	WASHER, 1/4 X 5/8 FLAT SS		
14	86323330	2	WASHER, 1/4 ID X 1.0 OD FLAT BLK		
15	86311990	1	HINGE, 9.5" LG X .074 THK		
16	86312000	1	LID, SOLUTION, COVER		
17	86312010	1	LID, SOLUTION, HINGE BRKT		
18	86318900	1	TANK, SOL, TRIM 150		
19	86297620	2	STRAP, HAND TOOL		
20	86317560	1	SPACER, .50 ODX .28 ID X 1.0L		
21	86318790	1	WASHER, 1.032ID X 1.5OD X .062THK		
22	86242130	2	KNOB, 1/4 HEX PRESS-LOC WING		
23	86324030	2	PLATE, MOUNTING, SOLUTION		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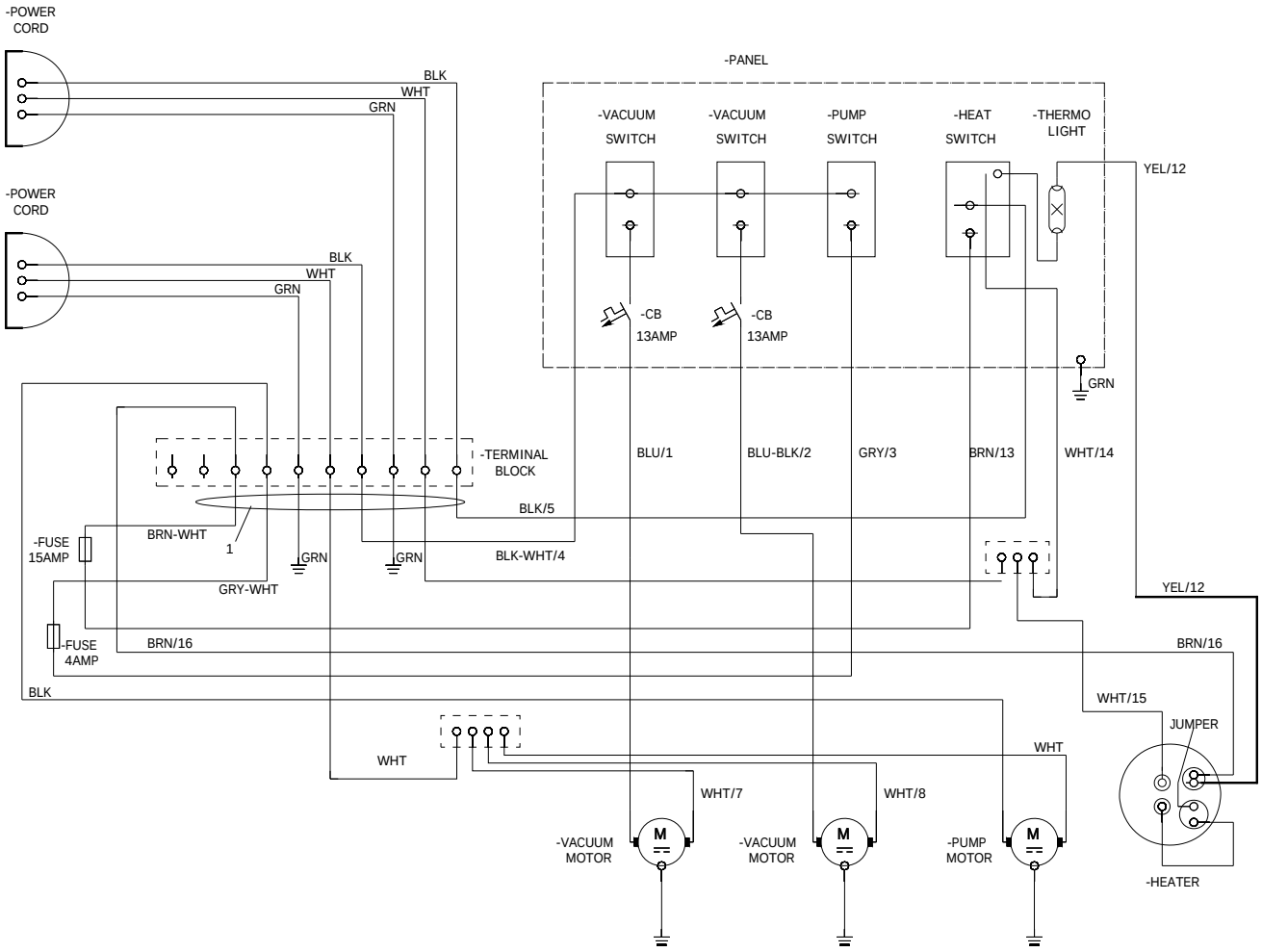
REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	86005810	8	NUT, 1/4-20 HEX NYLOCK SS		
2	86274090	5	SCR, 10-32 X 1.5 PPHMS		
3	86233430	2	CLAMP, 2.50 WORM GEAR		
4	86010630	16	WASHER, 1/4 X 5/8 FLAT SS		
5	86278990	8	WASHER, #8 X 3/8 FLAT		
6	86311520	1	MANIFOLD, VACUUM, DUAL		
7	86312990	1	GASKET, VAC MANIFOLD, DUAL		
8	86314710	8	SCR, 1/4-20 X 5.50 HHCS PLT		
9	86317630	8	SCR, #8 X 3/4" PPHSMS TYPE AB		
10	86318300	1	HOSE, VAC, 2.0 ID X 18"L		
11	86318760	2	VAC ASM, 2-STAGE, 120V		
-	86135320	-	SP BRUSHES SET (120V VAC)		
12	86312080	2	COVER, VAC MOTOR		
13	86312220	2	BASE, VAC MOTOR, 2 STAGE		
-	86319020	-	VAC HOUSING, 2 STAGE		INCLUDES 12, 13


-POWER CORD
BLK
WHT
GRN
-POWER CORD
BLK
WHT
GRN
-PANEL
-VACUUM SWITCH
-VACUUM SWITCH
-PUMP SWITCH
-HEAT SWITCH
-THERMO LIGHT
YEL/12
-CB 13AMP
-CB 13AMP
GRN
-TERMINAL BLOCK
BLU/1
BLU-BLK/2
GRY/3
BRN/13
WHT/14
BLK/5
-FUSE 15AMP
BRN-WHT
1
GRN
GRN
BLK-WHT/4
GRY-WHT
YEL/12
-FUSE 4AMP
BRN/16
BRN/16
BLK
WHT/15
JUMPER
WHT
WHT
WHT/7
WHT/8
-VACUUM MOTOR
-VACUUM MOTOR
-PUMP MOTOR
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-HEATER

REF	PART NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES
1	98407920	1	HARNESS KIT, HEATED		

REF. NO.	MODEL: SERIAL #
1	N/A